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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/521,186	03/08/2000	Dannie C. Lau	PHAT-1002US0 BBM	1788

7590 12/24/2003

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EXAMINER

PENDLETON, BRIAN T

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 12/24/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/521,186

Applicant(s)

LAU ET AL.

Examiner

Brian T. Pendleton

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-30, 34 and 38-41 is/are rejected.
- 7) ☒ Claim(s) 17, 31-33 and 35-37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-4, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Schulhof et al. Schulhof et al disclose an apparatus for distributing audio comprising dock 36, music storage device 18 which has audio program materials stored digitally, audio head unit 46 (AM/FM car radio) and portable storage medium 50 (i.e. hard disk drive, column 9 line 6) which is removably connected to the dock 36 and in-vehicle docking interface device 42 which is coupled to the audio head unit. Claim 1 is met. As to claim 2, column 7 lines 14-27 teach that the portable storage medium stores music files which are played by the audio head unit 46. Regarding claim 3, column 9 lines 60-63 state that the music storage device 18 contains compressed material and figure 2 indicates that the portable storage medium decompresses the material.

Claims 13, 14, 16, 19, 27, 29 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Berhan. Berhan discloses an system for audio data collection and

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management comprising port (circuitry for connection) 144 connected to disc changer 142, speakers 116, processor readable storage devices (hard disk cartridge) 118, processor 124 and interface circuit 122 whereby the disk cartridge 118 contains hard disk 120 which stores software that configures interface circuitry 122 to communicate with CD changer circuitry 144. The interface circuitry 122 provides two-way communication between the CD disc changer 142 and processor 124. See column 5 lines 10-25. Claims 13, 16 and 34 are met. As to claim 14, the hard disk 120 is removable (see figure 3) and stores music data once extracted from the CD units 140. Column 2 lines 28-39 describes the extraction process. The stored music on hard disk 120 is available for future playback in the controller 114. Regarding claims 19, 27, and 28, there is disclosed control panel 110 for controlling the CD changer unit. As to claim 29, interface circuitry can be defined as a processor for communicating with the disc changer while sound card 132 is a processor for playing music stored on hard disk 118.

Claims 38 and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Aoki et al. Aoki et al disclose an apparatus for operating instruments for a vehicle comprising selecting via mode selection switch 19 music from disc changer 3, radio 7 or cassette deck 6 and reproducing the music through loudspeaker 29. Cassette deck 6 accepts tape cassettes which are removable hard disks since they save audio data on the magnetic reels. As to claim 41, there is disclosed a control panel which has buttons 19, 20 and 23.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulhof et al. Schulhof et al teach an apparatus comprising dock 36, music storage device 18, audio head unit 46, in-vehicle docking interface 42 and portable storage medium 50. Schulhof et al do not disclose that the audio head unit includes a switch for detecting whether the storage medium 50 is connected to the audio head unit and preventing the audio head from operating if storage medium 50 is not connected. However, Examiner takes Official Notice that automatically disconnecting an audio system if a storage medium is not connected to it was well known in art at the time of invention. Radio tuners in vehicles have been known to activate when a compact disc is inserted into the audio head unit (even when the device is in an OFF mode) and deactivate when the disc is taken out. One of ordinary skill in the art would have known this feature and incorporated it in the apparatus of Schulhof et al.

Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulhof et al in view of Burks. Schulhof et al teach an apparatus comprising dock 36, music storage device 18, audio head unit 46, in-vehicle docking interface 42 and portable storage medium 50. Schulhof et al do not disclose that portable storage medium 50 stores play lists and the audio head plays music data according to the play

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list (per claim 5) or that the medium 50 stores an operating system for the audio head processor (per claim 6). Burks teaches a system and method for processing audio data comprising a memory 29 which stores a plurality of audio data files 52, a compression application 54, decompression application 56, system manager 26, network 48 and storage medium (CD) 23. Audio data files 52 are downloaded to the storage medium 23 upon request. Along with the audio data files 52, a decompression application 56 and organizational structure information 59 which contains a play list are also downloaded. See column 4 line 15 – column 5 line 14. The benefit of including the decompression application (operating system) was ensuring the compatibility of the type of audio data files 52 being downloaded with a particular compression/decompression scheme. It obviated the problem of downloading a certain type of compressed audio material and the audio reproduction device not being compatible with the that type of audio material. Thus, one of ordinary skill in the art would have been motivated to provide that feature. Burks also includes a play list in organizational structure information 59. Play lists were advantageous because the user was given the ability to select his/her preferred songs to be put on the storage medium 23. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include play lists and an operating system, per the teachings of Burks, on the storage medium 50 of Schulhof et al.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulhof et al in view of the Applicant's Admitted Prior Art (APA). Schulhof et al teach an apparatus comprising dock 36, music storage device 18, audio head unit 46, in-

vehicle docking interface 42 and portable storage medium 50. However, Schulhof et al do not disclose that the audio head unit 46 has a disc changer. Nevertheless, on page 1 of the specification, Applicant admits to the fact that disc changers were commonly included in automobile audio systems. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate a disc changer in the audio head unit 46 of Schulhof et al. Claim 7 is met. As to claim 8, the Applicant also admits on page 11, lines 29-30 that many automobile stereo head units have a disc changer port in the back of the head unit. Such a statement is an acknowledgment of prior art devices and therefore one of ordinary skill in the art would have provided the audio head unit 46 of Schulhof et al with a port.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulhof et al in view of Berhan. Schulhof et al disclose a dock 36, music storage device 18, audio head unit 46, in-vehicle docking interface 42 and removable hard disk 50. Schulhof et al do not disclose a disc changer connected to the audio head unit and user replaceable program code programming the audio head unit to communicate with the disc changer. However, as stated above, it was obvious at the time of invention to include a disc changer in the vehicle of Schulhof et al and connect it to the audio head. The admitted prior art supports having this feature. In addition, Berhan teaches a system with a removable hard disk drive and a CD changer. Furthermore, Berhan suggested the use of program code (which is always user replaceable) stored on disk cartridge 118 which configures interface circuitry 122 (in the audio head) to communicate with CD changer circuitry 144. It was beneficial to include program code

on the disk cartridge 118 in order to ensure it can communicate with the particular CD changer. Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to also include program code to program the audio head to communicate with the disc changer.

Claims 10, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulhof et al, APA and Nicholson et al. The combination of Schulhof et al and the admitted prior art teach an apparatus comprising dock 36, music storage device 18, audio head unit 46, in-vehicle docking interface 42, portable storage medium 50, wherein the audio head unit 46 contains a disc changer. The combination does not state the audio head includes a control panel and said control panel includes buttons to control the disc changer. It was common practice at the time of invention that audio head units be equipped with control panels. As evidence, Nicholson et al teach an automotive entertainment system comprising an audio head and control panel 10 which has buttons dedicated to control a disc changer (figure 1). See also column 1 line 43 – column 2 line 14. Since it was well known to have control panels, for the purpose of giving an user to ability to control and manipulate the audio source, in vehicles at the time of the invention, it would have been obvious to one of ordinary skill in the art to include such a control panel in the combination of Schulhof et al and the APA. As to claim 11, Schulhof et al and the APA do not disclose a radio tuner. However, Nicholson et al teach a radio tuner and inherently there is a switch to switch between the input audio sources (radio tuner, CD changer, tape player). Incorporating the vehicle docking interface device 42 of Schulhof et al in the audio system, as the

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combination would entail would add another audio source. It would have been obvious to one of ordinary skill in the art at the time of invention that the additional input audio source would be coupled to the existing switch of Nicholson et al. Thereafter the output is obviously coupled to the speakers.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulhof et al in view of Kikinis. Schulhof et al disclose a dock 36, music storage device 18, audio head unit 46, in-vehicle docking interface 42 and removable hard disk 50. Schulhof et al do not disclose that the music storage device is a computer and the dock is connected to the USB port of the computer. In Schulhof et al the dock is connected via a cable system to a library 18 of music data files. The library 18 has digital data, therefore it is a computer. Accordingly it was taught to that the music storage device is a computer. The system of Schulhof et al remotely connects to the computer, but at the time of invention it was known to have personal computers storing music data (i.e. MP3 files and other digital formats) in their hard disk drives. It was more convenient having a personal computer and access to data instantaneously. Therefore, one of ordinary skill would have been motivated to provide a personal computer with a dock. Consequently, a personal computer would have to have a USB port connected to the dock, since the dock is a peripheral device. Per the teachings of Kikinis, which describes a computer with physical engagement interfaces (which one of ordinary skill in the art would recognize as docks) that have USB ports, it would have been obvious to connect the dock 36 of Schulhof et al to a computer via an USB port.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berhan in view of Schulhof et al. Berhan disclose a vehicle sound system comprising a port connected to a disc changer, speakers, readable storage device and a processor, in communication with the storage device said processor also communicating with a disc changer based on program code. Berhan suggested that the removable storage device (hard disk 118) can be used in connection with a personal computer. Schulhof et al teach a removable storage device 50 with can be connected to dock 36 with is coupled to a computer system having music files in sources 14-16. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a dock on a personal computer for download music onto hard disk 118 in the apparatus of Berhan. The use of the dock gave the user even more flexibility with the songs to be replayed on the disk 118 while in a mobile setting.

Claims 18 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berhan in view of Aoki et al. Berhan disclose a vehicle sound system comprising a port connected to a disc changer, speakers, readable storage device and a processor, in communication with the storage device said processor also communicating with a disc changer based on program code. Berhan does not explicitly disclose a radio tuner and a switch for switching between music from the radio tuner, the disc changer and from music data files (found on removable disk 118). However, as evidenced by Aoki et al, it was well known in the art to have multiple music sources and a switch to select between them (see figure 6 and abstract). The advantage of multiple sources was an increase in the choice for the listener. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of invention to include a radio tuner and switch to switch between the audio sources in the apparatus of Berhan.

Claims 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berhan in view of Burks. Berhan discloses an system for audio data collection and management comprising port (circuitry for connection) 144 connected to disc changer 142, speakers 116, processor readable storage devices (hard disk cartridge) 118, processor 124 and interface circuit 122 whereby the disk cartridge 118 contains hard disk 120 which stores software that configures interface circuitry 122 to communicate with CD changer circuitry 144. The interface circuitry 122 provides two-way communication between the CD disc changer 142 and processor 124. Berhan does not teach that a play list is included on the hard disk cartridge 118. Burks teaches a system and method for processing audio data comprising a memory 29 which stores a plurality of audio data files 52, a compression application 54, decompression application 56, system manager 26, network 48 and storage medium (CD) 23. Audio data files 52 are downloaded to the storage medium 23 upon request. Burks also includes a play list in organizational structure information 59. Play lists were advantageous because the user was given the ability to select his/her preferred songs to be put on the storage medium 23 (i.e. customization). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include play lists, per the teachings of Burks, on the hard disk cartridge 118 of Berhan. Claim 20 is met. As to claim 21, inherently a play list includes an order for instructing the processor to play the music data files according to the order. Regarding claims 22 and 24, Berhan teaches control

panel 110. Per claims 23 and 26, Burks teaches that input device 37 can be used to select one of the play lists and edit play lists (see column 4 line 55 – column 5 line 5). Berhan discloses a hard disk cartridge 118 which is removable, meeting claim 25.

Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al in view of Berhan. Aoki et al disclose an apparatus for operating instruments for a vehicle comprising selecting via mode selection switch 19 music from disc changer 3, radio 7 or cassette deck 6 and reproducing the music through loudspeaker 29. Aoki et al do not disclose communicating with the disc changer 3 based on user replaceable interface program code. Berhan teaches a method of playing music and communicating with the disc changer using interface program code. It would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings of Berhan in the apparatus of Aoki et al to facilitate transmission of audio from the disc changer to the speaker. All audio systems had to have such program code in order to work with disc changers.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki in view of Burks. Aoki et al disclose an apparatus for operating instruments for a vehicle comprising selecting via mode selection switch 19 music from disc changer 3, radio 7 or cassette deck 6 and reproducing the music through loudspeaker 29. The use of a play list was not taught in Aoki et al, however that feature was well known in the art as evidenced by Burks. The use of play lists afforded the user customization, an advantageous feature.

Allowable Subject Matter

Claims 17, 31-33 and 35-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Brian Tyrone Pendleton
December 13, 2003



XU MEI
PRIMARY EXAMINER